

## REPTILIA: TESTUDINES: EMYDIDAE

## RHINOCLEMMYS ANNULATA

## Catalogue of American Amphibians and Reptiles.

ERNST, CARL H. 1980. *Rhinoclemmys annulata*.

***Rhinoclemmys annulata* (Gray)**  
Brown land terrapin

*Geoclemmys annulata* Gray, 1860:231. Type-locality, "Esmeraldas, Ecuador." Syntypes, juvenile, British Mus. (Natur. Hist.) 1946.1.22.56; adult male, BMNH 1947.3.5.58 collected by M. Frezer, no dates; and adult female, BMNH 1947.3.5.59, collected by J. Rosenberg, no date (examined by author).

*Rhinoclemmys annulata*: Gray, 1863:183.

*Chelopus annulatus*: Cope, 1865:186.

*Clemmys annulata*: Strauch, 1865:82.

*Rhinoclemmys annulata*: Gray, 1873:145. First use of combination.

*Chelopus gabbii* Cope, 1875:153. Type-locality, (Sipurio) Costa Rica (from Nat. Mus. Natur. Hist. catalog). Holotype, adult male, U.S. Nat. Mus. 45905, collected by W. N. Gabb, no date (examined by author).

*Emys gabbi*: Günther, 1885:7.

*Nicoria gabbi*: Boulenger, 1889:119.

*Nicoria annulata*: Boulenger, 1889:120.

*Geoemyda annulata*: Siebenrock, 1909:499.

*Geoemyda gabbi*: Siebenrock, 1909:499.

*Rhinoclemmys gabbi*: Allee, 1926:451.

*Geoemyda annulata*: Park, Barden, and Williams, 1940:122. Lapsus calami.

*Geoemyda annulata*: Medem, 1958:19. Lapsus calami.

*Callopsis annulata*: Smith, Smith, and Sawin, 1976:216.

- CONTENT. *Rhinoclemmys annulata* is a monotypic species.

- DEFINITION. Adults grow to 204 mm in carapace length, no size dimorphism. The high carapace is roughened due to growth rings on scutes, posteriorly serrated, and usually widest and highest just behind the middle. The vertebral scutes are often flattened, but still have a low central blunt keel. The carapacial

coloration is extremely variable, ranging from unicolored black to dark brown with orange pleural and vertebral blotches to tan with yellow pleural and vertebral blotches. The pleural blotches are often radiations from the dorso-posterior corner; the vertebral keel is usually yellow. The unhinged plastron is well developed, upturned anteriorly, and notched posteriorly; it is a black or dark brown with a yellow border and, in some, a yellow midseam. The head is small and has a slightly projecting snout with a slightly beaked upper jaw. A yellowish or reddish stripe extends from the orbit at a slight angle to the nape. A stripe runs from the lower posterior corner of the orbit to the tympanum where it joins another stripe from the upper jaw. Another stripe passes from the upper anterior corner of the orbit to the tip of the snout. The chin may be mottled with very small dark spots. The feet are unwebbed or only slightly so. The forelegs have large scales and are yellowish with dark stripes of wide black spots. The skin elsewhere is gray-brown to yellow. Males have concave plastrons and longer tails with the vent beyond the carapace margin; females have flat plastrons and shorter tails with the vent beneath the carapace.

- DESCRIPTIONS. General descriptions of adults are given by Boulenger (1889), Siebenrock (1909), Medem (1956, 1962), Pritchard (1967), and Ernst (1978). Parsons (1960, 1968) describes the choanal structure, and the rostral pores and mental glands are described by Winokur and Legler (1974, 1975).

- ILLUSTRATIONS. Medem (1962) presents a color photograph of an adult; other photographs and drawings of adults are in Medem (1956, 1962), Wermuth and Mertens (1961), Mittermeier (1971). Winokur and Legler (1975) show a photograph of a section through a mental gland. Carapacial damage by ticks is illustrated by Schmidt (1946).

- DISTRIBUTION. *Rhinoclemmys annulata* occurs from south-eastern Honduras (Los Andes, Colón) southward through eastern Nicaragua, Costa Rica and Panama to western Colombia and Ecuador.

- FOSSIL RECORD. None.

- PERTINENT LITERATURE. The best general accounts are given by Medem (1956, 1962) and Mittermeier (1971). Other important references are listed by topic. Taxonomy: McDowell (1964), Ernst (1978). Parasites: Fairchild (1943), Schmidt (1946), Evans (1947), Fairchild et al. (1966), Mittermeier (1971), Ernst and Ernst (1977). Daily activity pattern: Park et al. (1940). Cervical vertebrae: Williams (1950). Blood: Frair (1977). Reproduction: Ewert (1979), Moll (1979).

- ETYMOLOGY. The name *annulata* is derived from the Latin *annulatus* meaning furnished or ornamented with a ring and probably refers to the growth rings on the carapacial scutes.

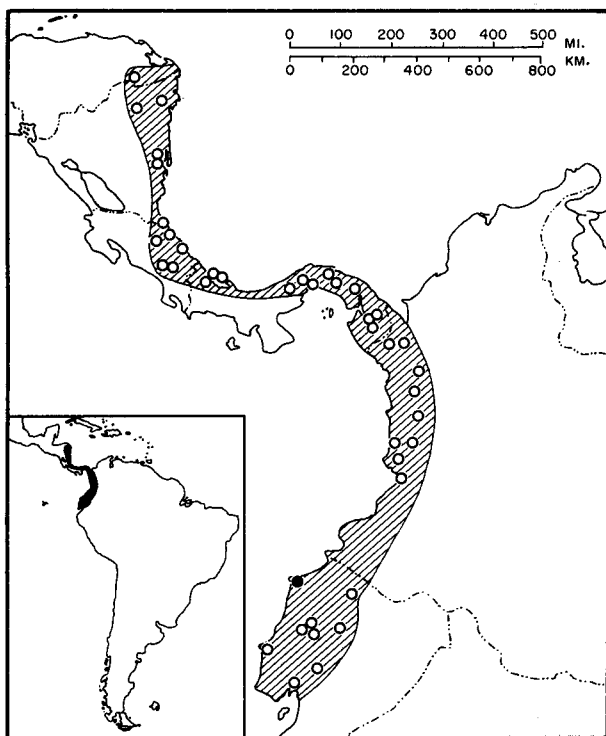
## COMMENT

*Rhinoclemmys annulata* is highly variable but not composed of separate recognizable populations. Much variation occurs in all populations regarding carapacial coloration and patterns. The situation is similar to that within populations of the box turtle, *Terrapene c. carolina*. The species needs to be studied throughout its entire range.

Despite being common in some forested areas of Panama, this species has been little studied in the field.

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MAP. The solid circle marks the type-locality; open circles indicate other selected localities.

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